

(F)—NATURAL REPRODUCTION.

92. In the Konkan the spontaneous growth of vegetation is very vigorous. In the Khairni Patte reserves of the Sálsette Táluka of North Thána, khair seedlings are very noticeable in all directions; and also teak saplings, which have grown up within the last few years, are very general. The Divisional Forest Officer, East Khándesh, has observed a fact often brought to notice, that although nearly all the seedlings which naturally appear during the rains apparently wither and die when three or four months old, so that very few are to be seen in the hot weather, still their roots survive and send up fresh shoots in the next rains. In many places he has seen plants two or three years old which their freshy appearance indicate to have grown up in this way, though hardly any first year seedlings were visible. The Divisional Forest Officer, Násik, reports :—

“The general improvement in the state of the hills and lands in our charge has been commented upon very frequently by many people whom I have come across in my travels during the past season. This is very noticeable in the forests of the Yeola, Nándaon, and Málegaon ranges; again in the Ghát forests and in those below the Gháts the forests are carpeted with a strong growth of seedlings, the seeds of which Nature has herself sown. In the Peint Range the difference between the growth of recent and of former years is most marked. The latter consists of trees hollow, crooked; and the former of beautiful well-grown poles.”

93. The Divisional Forest Officer of Ahmednagar reports of the visible increase of forest growth in all the portions of the hill reservations which are closed against cattle, and that he has received testimony of the village officers as to the increase of the forest vegetation on the hill-slopes of the range of hills bordering the Nagar Táluka on the north. Mr. Wroughton, the Divisional Forest Officer of Poona, reports, with the Deccan system of broad-cast plantation by forest guards it is difficult to distinguish between natural and artificial reproduction.

“I may record, however, that from many independent sources I have had independent testimony to the improvement of the reserves of this division. I may mention, amongst others, two Native members of the Forest Commission who expressed to me their astonishment at the improvement of the vegetation on the Khandála hills. Mr. Sheppard, Commissioner, N. D., who noticed to me the improvement of the growth on the Sakur Pathar. A military officer, who remarked on the improved look of the hills between Poona and Purandhar. The villagers of Lohogad informed me that, owing to the spreading of forest growth on the hill slopes, the difficulty of turning out tigers and other wild animals for sportsmen from Poona and Bombay to shoot in their village had greatly increased. In fact, there can be no doubt of the very marked improvement everywhere in the past few years.”

94. The Divisional Forest Officer, Sholápur reports that the bare hills in many places are gradually beginning to show a little vegetation of tarvad bushes (*Cassia auriculata*) and thorns, *but which all help the work of disintegrating the soil and preparing the way for timber trees.* The hills in the Bársi Táluka show in many places a steadily increasing vegetation climbing up their slopes on the least exposed faces, and in a few years' time these hills will present a very different appearance. The Divisional Forest Officer, Panch Maháls, states that natural reproduction is fair, but would be excellent if grazing were restricted, which has greatly injured the forests of the Godhra Táluka in the past.

95. There is no longer room for doubt that the Forest Department can by simple and inexpensive measures restore timber to all the bare hills of the Deccan and convert them into reservoirs for impounding the rain that falls upon the hills. That these hills will grow timber of large size, is evidenced by the presence of sacred groves which have remained here and there, superstition having guarded them against the desolating axe. But there is a new difficulty appearing in the path of reboisement, *viz.*, a demand for thorns for fencing purposes, and claims made by some Revenue Officers to have the power of granting thorns to applicants from the hill sides. To fence in an acre field with thorns necessitates the stripping of several acres of semi-denuded hills undergoing reboisement, while the thorns dry up and rot away soon after they are put down, high winds sweeping over the Deccan plains blow them away, they are appropriated for firewood, and the dry thorn fencing of a field has to be replenished before the crop it was intended to protect has been harvested. The thorns in reservations under treatment for reboisement create soil, they impound the rainfall, they nurse seedlings to produce timber and firewood, and they have a climatic value upon the

hill sides,—all these properties are beneficial to agriculture, and they serve in the highest degree the interests of cultivation when they are to be found growing full of vigorous life upon the drainage slopes on the higher levels of the country. There are forests from which the removal of thorns does good, where the thorns have worked their capable purpose, and are required to give room to better growth.

(G)—ARTIFICIAL REPRODUCTION.

96. In the North Thána Division plantations are made upon open spaces inside the forest reservations. Lands which having been under cultivation at one time have been acquired for forests in virtue of their position inside forest reserves. 105 acres were newly planted during the year, which with the 2,038 acres of similar plantation at the close of last year makes 2,143 acres in all. Slips of the bhendi tree (*Thespesia populnea*) have been put down near the sea-coast, and seedlings of all kinds brought from neighbouring forests, where they had naturally come up, have been planted out both by forest guards and by hired labour. In the South Thána Division 271 acres were thus planted during the year. The hill reserves in Khándesh have been broad-casted, and on the plains lands have been ploughed and sown, and in places pits have been made and seeds sown in them. In the Násik Division the plantations are reported to be growing up so vigorously as to have become coverts for game of all sorts, which largely resorts to them. In the Dongargaon plantation in the Ahmednagar Division two dams, which were built across a stream to impound water for irrigating the area where exotics are grown and cultural experiments made, were unfortunately breached by the rain in the month of May, which came down suddenly before the masonry had set, and were able to bear the strain. The following table shows the plantation work carried out in one division—Ahmednagar—and is a sample of what is being done. 102½ khandis of seeds were collected by the forest guards.

No.	Ranges.	BY HIRED LABOUR.				BY FOREST GUARDS.			
		Ploughing whole Area.	Ploughing at 12 feet distance.	Pits at 5 feet distances.	Cost.	Area.	Pits.	Transplants.	Broad cast.
		Acres.	Acres.	Acres.	Rs. a. p.				
1	Nagar ...	12	...	85½	123 10 6	59	11,200	...	138
2	Párner ...	4½	...	...	57 2 3	48	16,000	1,000	330
3	Shrigonda ...	...	74½	...	40 11 0	416½	15,850	1,950	...
4	Karjat ...	21½	...	41½	44 14 0	10	9,200	2,675	335
5	Jámkhed ...	...	80½	48½	35 0 0	46½	11,000	2,200	2,893½
6	Sheygaon ...	...	...	24	10 0 0	490	10,600	2,200	193
7	Nevása ...	3	...	...	49 12 0	10	5,000	...	200
8	Ráhuri ...	1	...	...	8 4 0	11	7,200	...	2,750
9	Kopargaon ...	...	...	86½	48 11 3	14	7,000	1,400	210
10	Sangamner ...	...	15	40	18 13 3	223	19,605	20	3,902
				Broad cast.					
11	Akola ...	...	...	263½	24 12 0	95	24,600	5,025	16,036
	Total ...	41½	169½	589½	461 10 3	1,423	1,37,255	16,470	26,487½

97. In the Poona Division the forest guards made 35,625 pits, and sowed seeds in them upon the hill sides; the seed of the hirda tree (*Terminalia chebula*) was sown to a large extent, every forest guard sowing 100 pits. By hired labour 1,999½ acres were ploughed and sown, and 89,577 acres were pitted over and sown at a total cost of Rs. 977-3-0.

98. 784 acres of fresh ground were planted in the Sátára Division by hired labour in 15 forest reserves situated in 9 ranges, and 19,275 acres were sown broadcast and otherwise by forest guards. 7,933 bambus were planted, out of which 20 per cent. were said to be surviving at the end of the hot weather, and the number of seedlings alone is given at 3,25,495; but reliance cannot be placed upon this enumeration, and the Conservator is of opinion that statements of the kinds are generally inaccurate, and should be avoided. Teak transplants